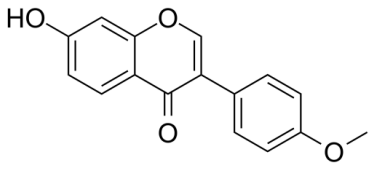
Data Sheet

Product Name:	Formononetin
Cat. No.:	CS-3081
CAS No.:	485-72-3
Molecular Formula:	$C_{16}H_{12}O_4$
Molecular Weight:	268.26
Target:	Apoptosis; FGFR
Pathway:	Apoptosis; Protein Tyrosine Kinase/RTK
Solubility:	DMSO : ≥ 35 mg/mL (130.47 mM)



BIOLOGICAL ACTIVITY:

Formononetin is a potent **FGFR2** inhibitor with an **IC_{50}** of ~4.31 μM. Formononetin potently inhibits angiogenesis and tumor growth[1]. **In Vitro:** Formononetin is one of the major isoflavonoid constituents isolated from Astragalus membranaceus and has been demonstrated diverse pharmacological benefits. Formononetin possesses anti-angiogenic activity in human colon cancer cells. Formononetin also promotes cell cycle arrest via downregulation of Akt/Cyclin D1/CDK4 in human prostate cancer cells[1]. Formononetin (25 to 150 μM) markedly decreases the proliferation of endothelial cells stimulated by FGF2[1]. **In Vivo:** Formononetin dramatically suppresses tumor volumes and the Formononetin-treated group tumor weight are significantly inhibited compared with the vehicle group . Formononetin treatment is well tolerated, and there is no significant difference in weight between vehicle group and formononetin treated groups[1].

References:

[1]. Xiao Yu Wu,et al. Formononetin, a novel FGFR2 inhibitor, potently inhibits angiogenesis and tumor growth in preclinical models. Oncotarget. 2015 Dec 29;6(42):44563-78.

CAIndexNames:

4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-methoxyphenyl)-

SMILES:

O=C1C(C2=CC=C(OC)C=C2)=COC3=CC(O)=CC=C13

Caution: Product has not been fully validated for medical applications. For research use only.

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